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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKETT NO.
9/530,346 9/538,847 9/995,419			

EXAMINER	
ART UNIT	PAPER NUMBER
	8

DATE MAILED:

EXAMINER INTERVIEW SUMMARY RECORD

All participants (applicant, applicant's representative, PTO personnel):

(1) Joseph Waitach (3) _____

(2) Michael Schiff (4) _____

Date of interview 3/26/03

Type: ☐ Telephonic ☒ Personal (copy is given to ☐ applicant ☐ applicant's representative).

Exhibit shown or demonstration conducted: ☐ Yes ☒ No. If yes, brief description: _____

Agreement ☐ was reached with respect to some or all of the claims in question. ☒ was not reached.

Claims discussed: pending claims

Identification of prior art discussed: aref regarding definition of a patentable will be made of record

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: Each case was discussed in turn. Specific claim amendments were discussed for '867 and '419. Examiner considered rejoinder in restriction.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

☐ 1. It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph below has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW (e.g., items 1-7 on the reverse side of this form). If a response to the last Office action has already been filed, then applicant is given one month from this interview date to provide a statement of the substance of the interview.

☐ 2. Since the examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the substance of the interview unless box 1 above is also checked.

Joe Waitach
Examiner's Signature

PTOL-413 (REV. 2-93)

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SELECTIVE ANTIBODY TARGETING OF UNDIFFERENTIATED STEM CELLS

09/995,419
Geron 096/004

Claims

1. *A method of producing a cell population depleted of undifferentiated stem cells, comprising:*
   a) genetically altering undifferentiated stem cells in the population so that they contain a nucleic acid molecule comprising the structure P–X, wherein X is nucleic acid sequence that causes expression of a cell surface antigen, and P is a transcriptional control element operatively linked to X, such that the surface antigen is expressed in the undifferentiated stem cells; and
   b) depleting undifferentiated cells from the population by combining the cells with a ligand specific for the antigen.

2. The method of ~~any preceding claim~~ claim 14, wherein the undifferentiated stem cells are primate pluripotent stem (pPS) cells.

3. The method of ~~claim 1~~ claim 15, wherein the ligand is an antibody or a lectin.

4. The method of ~~claim 1~~ claim 15, comprising combining the cells with ligand specific for the antigen, and separating cells that have not bound the ligand.

5. The method of ~~claim 1~~ claim 15, comprising combining the cell population or progeny thereof with complement and antibody specific for the antigen under conditions that permit the complement to lyse cells to which the antibody has bound.

6. The method of ~~claim 1~~ claim 14, wherein X encodes a glycosyltransferase.

7. The method of claim 6, wherein X encodes an $\alpha(1,3)$galactosyltransferase.

8. The method of claim 6, wherein X encodes an ABO blood group transferase.

9. The method of ~~claim 1~~ claim 14, wherein P is an OCT-4 promoter or a promoter of telomerase reverse transcriptase (TERT).

10. The method of ~~claim 1~~ claim 14, wherein P–X is an introduced heterologous molecule.

11. The method of any of ~~claim 1~~ claim 14, wherein P is an endogenous transcriptional control element.

12. The method of ~~claim 1~~ claim 15, ~~wherein the cell population is genetically altered~~ further comprising genetically altering the cell population such that ~~X~~ P–X is transiently expressed in undifferentiated cells in the population.

13. The method of ~~claim 1~~ claim 15, ~~wherein P–X~~ further comprising genetically altering the cell population such that P–X is inherited by progeny of cells in the population, becoming expressed in undifferentiated progeny.

14. A method of producing differentiated cells, comprising
    a) obtaining a cell population comprising undifferentiated stem cells that contain a nucleic acid molecule comprising the structure P–X, wherein X is nucleic acid sequence that causes expression of a cell surface antigen, and P is a transcriptional control element operatively linked to X, such that the surface antigen is expressed in undifferentiated cells; and
    b) causing at least some undifferentiated cells in the population to differentiate.

15. The method of claim 14, further comprising depleting undifferentiated cells from the population by combining the cells with a ligand specific for the antigen.

16. A stem cell genetically altered to express a carbohydrate antigen not normally expressed by the cell.

17. The stem cell of claim 16, wherein expression of the carbohydrate antigen is controlled by a transcriptional control element that preferentially causes expression in undifferentiated cells.

18. The stem cell of claim 17, wherein the transcriptional control element is an OCT-4 promoter or a promoter of telomerase reverse transcriptase (TERT).

19. The stem cell of claim 16, genetically altered with a glycosyltransferase.

20. The stem cell of claim 19, wherein the glycosyltransferase is an α(1,3)galactosyltransferase.

21. The stem cell of claim 19, wherein the glycosyltransferase is an ABO blood group transferase.

22. The stem cell of claim 16, which is a human embryonic stem (hES) cell.